

## CLEAN AMENDED SHEET

ART 34 AMDT

C L A I M S

5 1. Swirl tube separator for separating solids from a  
gas-solid containing feed comprising a tubular housing,  
an axial inlet for introducing a gas-solids mixture at  
one end of said housing, wherein said axial inlet for  
10 introducing the gas-solids mixture is provided with  
swirl imparting means, a solids outlet opening at the  
opposite end of said housing, and a co-axial positioned  
tubular gas outlet conduit placed at an end of said  
housing such that the solids outlet opening is  
15 positioned in the space between the tubular gas outlet  
conduit and the wall of the tubular housing, wherein  
along the axis of the tubular housing a vortex extender  
pin is present.

20 2. Swirl tube separator according to claim 1, wherein  
the pin is present along at least 20% of the axis of the  
tubular housing, said axis running from the inlet  
opening of the gas outlet conduit up to the end of the  
tubular housing opposite said gas outlet conduit.

25 3. Swirl tube separator according to claim 2, wherein  
the pin is present along at between 30 and 100 % of the  
axis of the tubular housing.

30 4. Swirl tube separator according to claim 3, wherein  
the pin is present along 100 % of the axis of the  
tubular housing.

35 5. Swirl tube separator according to any one of claims  
1-4, wherein the pin extends from the interior of the  
gas outlet conduit into the tubular housing and wherein  
the pin is fixed within the gas outlet conduit by means

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- 5 of supporting means, said supporting means are swirl means which swirl means are positioned such that they decrease the swirling motion of the gas being discharged via the gas outlet conduit.
- 10 6. Swirl tube separator according to any one of claims 1-5, wherein the inlet for introducing the gas solids mixture and the gas outlet conduit are arranged at one end of the tubular housing and the solids outlet opening is positioned at the opposite end of said housing.
- 15 7. Multi separator provided with a plurality parallel operating swirl tube separators according to any one of claims 1-6.
8. Process to separate solids from a solids laden gaseous mixture having a solids content of between 100 and 500 mg/Nm<sup>3</sup> to obtain a gaseous stream containing less than 50 mg solids per Nm<sup>3</sup> in a swirl tube separator according to any one of claims 1-6 or in a multi separator according to claim 7.